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**THE ZOOLOGIST:**  
A  
**POPULAR MONTHLY MAGAZINE**  
OF  
**NATURAL HISTORY**

AND  
**JOURNAL FOR RECORDING FACTS & ANECDOTES**

RELATING TO  
**QUADRUPEDS, BIRDS, REPTILES, FISHES, ANNELIDES,  
INSECTS, WORMS, ZOOPHYTES, &c.**

**THEIR HABITS, FOOD, RETREATS, OCCASIONAL APPEARANCE,  
MIGRATIONS, NESTS AND YOUNG.**

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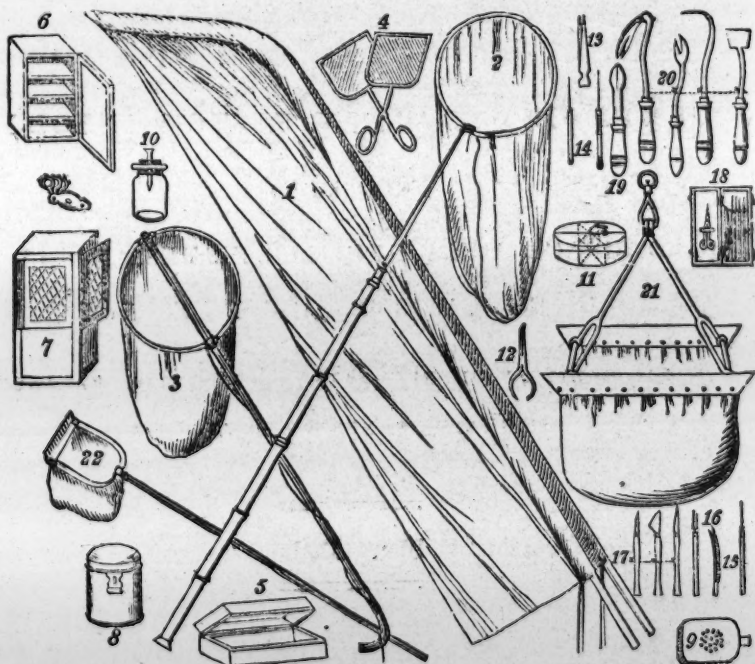
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*The Corby Crows and the Rooks.* BY W. H. SLANEY, ESQ.

THAT "the times are out of joint" few can deny; and from what I am about to relate, it would appear that the aggressive and belligerent spirit put forth by His Imperial Majesty of Russia, which is now "frightening the world from its propriety," is not alone confined to the human race, but has extended itself, to some at least of the feathered creation as well.

At a short distance, and on the opposite side of a small valley from whence this is written, a large rookery has been established time out of mind; but as the Malthusian doctrine had no influence on the system adopted amongst the rooks, and as they never considered whether the supply of trees to build nests in equalled the demand, the number of nests and young rooks increased so fast, as to render it absolutely necessary that fresh colonies should be established in the neighbourhood; and the original rookery, which was of large extent, sent off detachments from time to time to adjacent places, and amongst others, some high ash-trees, growing out of a pit at the corner of a meadow near the house, were selected as a favourite residence for one of these detachments, which, in a few years, increased and multiplied into a respectable rookery itself, containing from fifty to sixty nests. In this peaceful retirement the rooks have continued to live in harmony and quiet for some twelve or fifteen years, save and except that annually, about the beginning of June, an attack is regularly made upon the rooklings by the butler, groom, and gamekeeper, for the sake of the excellent pigeon-pies they are supposed to be capable of being converted into. But this disturbance of their juvenile felicity is not permitted simply for the sake of saying of them, as the old song said of the "four-and-twenty blackbirds baked in a pie," that it was "a dainty dish to set before a king," but because the numbers increased so fast, that the farmers complained of the injury done to their crops; and hence it became necessary to have a certain number from six to eight dozen, killed, in order to satisfy these seldom-contented agriculturists, and to save the whole colony from being decried: for farmers, while they admit that rooks do much good, yet are always inclined to condemn them when they do a little occasional harm. Many were the young rooks who, inheriting the craft and cunning of their parents, set at nought all the manœuvres of the butler and his assistants, and when scared away by the sounds of the early evening guns (not bells), betook themselves to the protection of





some large elm and fir-trees almost overhanging the house, and in which two or three pairs of aristocratic rooks, despising the common herd, had established their nests, looking down on the more immediate domain, which they considered doubtless as the Court end of the town, and exclusively belonging to themselves. Hither came the young fly-aways, and remained in safety until, in the progress of time, it became their turn to mate and return to the ash-tree coppice for the purpose of nidification. This happy system continued year after year with no interruption, except for the few days during the pie-making season before mentioned.

Towards the latter end of the autumn, as is the custom with rooks, they pay a visit to the rookery, just to look over the premises and see that all is in a proper state for early reparation when the pressure of circumstances in the ensuing spring requires such matters to be immediately attended to. As usual, in the beginning of the month of March last, many rooks came to the ash coppice in the corner of the meadow, and began repairing their nests, stealing materials from those of their friends and relations, unless most vigilantly watched by the respective owners; and thus proceeded matters for some short time until the better part of four or five nests were partially completed and many others begun, when suddenly a stop was put to all further industry on the part of the more diligent rooks, and their operations abandoned; and in the same proportion as the nests ceased to be built and renewed in this favourite spot, they increased in the original rookery on the other side of the valley, and also in the place where the Court end of the town was supposed to exist, until, in the latter place the nests, from two or three originally built there, have now increased to sixteen, with a likely prospect of a further addition. But why this sudden change and abandonment of the former locality, a proceeding so unusual in rooks? Some powerful and overwhelming cause must have arisen, but what occasioned it seemed a mystery, until it was discovered that a couple of carrion crows had, after the device of the Emperor of all the Russias, seized upon the rooks' provinces, and expelled them from their long-previously occupied dominions. At first, the rooks objected to this intrusion of their two sable enemies, and refused to quit; but the loud, sepulchral and warning voice of the crows bade them beware, and forthwith give place to these usurpers. Frightened at such threats and fearful denunciations, the rooks gave up and left the foreigners in possession of their much-loved home; and whenever a rook, thinking the coast might be clear, ventured to return to the half-finished nests, one of



other of the two corbies was sure to meet him, and again with dismal death-denoting croaks drove him away. Occasionally, however, the rooks would alight in some tree a short distance off, waiting to ascertain the result of these strange proceedings; but no sooner were they perched, than out sallied one of the crows, croaking and wailing at the poor affrighted rooks, till they were glad to escape the harrowing sound and decamp to one of the neighbouring rookeries, there to report the lamentable fate which had befallen the ancient and respected dynasty of rooks. Occasionally, too, a few jackdaws would alight in the ash-trees, curious as is their nature, to know what was astir; but no sooner had they commenced their pert, inquisitive note, than out flew the corbies and scared them away, taking them, no doubt, for some friendly European power come to assist the poor Turks; and away went jackdaw in a more hasty manner, than, it is sincerely to be hoped, any allied power of the Turks will ever do from the Russians. This forcible possession continued until the rooks had entirely given up all hope of recovering their lawful home; and with many bitter regrets and loud demonstrations of feeling at this most Russian-like attack on their rights, they ceased further to visit their old haunts.

Having thoroughly convinced myself, after several mornings' and evenings' careful watchings of the proceedings going on, what was the real state of the case, I thought it became me no longer to allow of this aggression on the part of the carrion crows, for whom, under no circumstances, have I any sympathy, knowing the great damage they do in various ways to young lambs, game, eggs, &c., I therefore volunteered an alliance with the persecuted rooks. For this purpose, I desired the keeper to go early and late, and secrete himself under the ash-trees in the pit where the two crows had now taken up their abode, and to shoot them as speedily as possible. For several mornings at 4 o'clock, and again late in the evenings, the keeper waited in vain, the two crows always keeping just out of reach; till at length, one unhappy crow coming somewhat nearer, the keeper shot at it, and declared, though it did not absolutely fall dead, he was certain he must have killed it, because it flew straight up as if it were going into the clouds, and he could see nothing more of it. The companion crow was too wary to let the keeper try the same experiment upon him, and kept aloof for two or three days, when again a pair were seen and heard croaking at every passing rook, as before. The keeper tried all means to circumvent the corbies, but could only report his own failure and consequent vexation: but unwilling to be

outwitted by a crow, he bethought him of fastening down near to the coppice a live cat secured to a peg, and watch the crows' approach; having done this, and placed himself in a convenient ambush, one of the crows espied the cat, and thinking it was there for no friendly purpose, began cawing and hovering over it, and giving the poor animal timely warning that if it did not forthwith decamp, it would very shortly be converted into crows' meat, and its skin probably be made to serve as a lining for the young crows' nest. Poor puss only replied by a few pensive mewings, when the angry crow made a nearer swoop, and thereupon off went the keeper's gun, killing the crow, and relieving the cat from further apprehension. Again was the same plan tried with the other crow, but in vain; but there being a necessity that the crow should be killed, and necessity being the mother of invention, the keeper having the night before caught seven or eight large rats in his rabbit-traps, placed some of them within sight of the crow, together with a large male ferret, pinned down in the cat's place, thinking that the curious appearance and strange chattering noise of the latter, when it found it could not get at the dead rats, purposely placed a little way off it, would probably attract the crow's attention. This proved successful, and the crow was soon shot, but not before another crow was caught in a steel trap baited with egg-shells, and placed on the top of a cropped hedge close by; and this last crow, supposing the keeper to be really correct in having killed the first he shot at, would then make up two pair of carrion crows which had alone, in the short space of a week or ten days, driven away from their previously long-established and constantly occupied rookery, not less than from 150 to 200 rooks, a circumstance which I am not aware has been noticed as occurring before.

I should add that within a very few days of the last of the crows being destroyed, some few pairs of rooks returned again, and recommenced building their nests; but this Russian invasion has so depopulated the province that there are now only to be seen four or five nests, where before there were fifty or sixty, and it will take a long time probably before the rooks gain sufficient confidence to return as formerly to the ash coppice.

WILLIAM HENRY SLANEY.

Hutton Hall, April 20, 1854.

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*Anecdote of an Eagle.* — I beg to forward for insertion in the 'Zoologist' the following curious anecdote, which has been kindly extracted and translated for me, from a Danish newspaper (the 'Fædrelandet') of the date of April 29th, 1854:—"A singular circumstance lately occurred at the village of Waäb, in South Schleswig. At noon-day a servant-maid was standing at Doctor Dittmann's window, with the youngest child in her arms, when suddenly down came a large bird of prey against the window, smashed it in, and fell motionless on the floor. The Doctor, who happened to be in the room, saw his guest was a dangerous one, namely, an eagle of some species, and twisted his neck for him before he came to his senses. The savage bird, probably, meant to have made prey of the child."—J. H. Gurney; Easton, Norfolk, May 8, 1854.

*Note on the Difference of Weight between the Male and Female of the common Sparrow-Hawk.* — A male and female sparrow-hawk were brought to me together a few days since, and it occurred to me that it would be interesting to ascertain the comparative weight of the two sexes: that of the male proved to be 5 oz., while that of the female was 10½ oz., being more than twice the weight of her partner; so great a difference (though probably not more than usual) is yet, perhaps, worth recording.—*Id.*

*Note on the Cuckoo carrying its Eggs in its Mouth.* — In the Rev. A. C. Smith's interesting paper (Zool. 4285) "On the manner in which parent birds occasionally remove their eggs and young," that gentleman refers to the Klaas' cuckoo of South Africa, carrying its egg in its mouth, and very naturally infers from analogy, that our common cuckoo may do the same. In proof that such is the fact, allow me to refer to the 'Zoologist,' (Zool. 3145), where a case in point was recorded by Mr. J. O. Harper.—*Id.*

*Occurrence of the Hoopoe at Chichester and Barnes Common.* — I am indebted to Mr. Cooper, of 28, Radnor Street, St. Luke's, for the sight of two hoopoes, in the flesh; the first, a female, shot at Chichester, on the 24th of April; its crop contained several Aphodii and the small larvæ of Lepidopterous insects: the second was shot on the 28th of April by a friend of Mr. Atkinson, of Queen Street, Hammersmith.—*Edward Newman.*

*Occurrence of the Golden Oriole at Godalming.* — When riding in a gig by Ockford Pond, on the 10th of April, and looking out for swallows, I was delighted to see a fine male golden oriole pass over my head: although I did not see him settle, there could be no mistake, as the sun shone brightly on his black wings and golden-yellow body.—*Waring Kidd; Ockford Road, Godalming, April 30, 1854.*

*Occurrence of the Lesser Spotted Woodpecker (Picus minor), at Turnham Green.* — A man, of whom I am in the habit of buying birds, brought me on Saturday last, April 15th, a female specimen of the lesser spotted woodpecker, and to-day he brought the male, which he shot at about the same spot as the other. According to the Rev. F. O. Morris's splendid coloured work on British birds, they are considered rare, but that they sometimes occur in Middlesex. They are pretty little creatures, only weighing about 5 drachms, and measuring 5½ to 6 inches.—*John Dutton; St. Peter's Place, Hammersmith, April 19th, 1854.*

*Occurrence of the Crossbill near Scarborough.* — We have had several of those singular birds, the common crossbill (*Loxia curvirostra*), shot lately in our neighbourhood; four of them came to me, one male and three females: the male was a very beautiful



one, and the bill turned opposite to those of the females. — *Alfred Roberts ; King Street, Scarborough, March 10, 1854.*

*Castings ejected by Rooks.*—On the 17th of April, 1854, while standing beneath the trees in a rookery, I noticed a considerable quantity of matter on the ground round the trunks of the trees, looking very much like dried horse-dung. On examining it closely, I found that it consisted of oval pellets (some entire and some broken) of yellowish matter, which had evidently been ejected from the stomachs of the rooks; castings as they are called. On looking at the materials composing them through a lens, they seemed to consist principally of hard and indigestible vegetable matter, mixed with pieces of the elytra of beetles and small stones. The circumstance which I have here related may be a common one, and rooks may regularly be in the habit of rejecting the indigestible portions of their food, but the fact is new to me, and I cannot find it recorded in any of the works on Ornithology which I have had an opportunity of consulting. It is well known that most birds of prey throw up feathers and bones in the form of castings, and Mr. Yarrell says also, that this habit "is common to the shrikes, the swallows, and most of the insectivorous birds which feed on Coleoptera,"\* but he does not say that the rook possesses it. Larvæ, worms, and other kinds of soft animal food, being the favourite diet of these birds, is it not probable that the rook may only possess this habit at seasons like the present, when the weather having been exceedingly dry for some time, it is obliged to live chiefly on grain and other vegetable food? In his 'Observations on Natural History,' the Rev. Leonard Jenyns makes this remark, when speaking of jackdaws building their nests in chimneys, "From the quantity of horse-dung which occasionally falls into the grates beneath where they are at work, I should suppose that they employ this material in some way, perhaps as a lining for their nests," (p. 153). With great diffidence I venture to throw a doubt upon the statement of so accomplished a naturalist and accurate an observer, but might not the apparent horse-dung have consisted of castings thrown up by the jackdaws? for the castings of the rooks bore so close a resemblance at a little distance to that substance, that at first I mistook them for it. Mr. Jenyns says, in another observation (dated April 27th, 1828), "A farmer in this neighbourhood observes that, for about a month at this period of the year, his corn-stacks are more resorted to and attacked by the jackdaws than at any other time," and that he is obliged to employ a boy to keep them off. This circumstance one would suppose must have some connexion with the breeding-season." Rooks may have the same propensity at that season as jackdaws, and the stomachs of both these birds being perhaps unprovided with a gizzard strong enough to grind down the husks and other hard parts of the corn, they may reject them in castings.—*R. H. Meade ; Bradford, Yorkshire, April 28, 1854.*

[See Hewitson's 'Oology,' i. p. 185, where the same fact is recorded, and a reference made to a prior record in Loudon's 'Magazine of Natural History.' It may be further observed that Mr. Hewitson attributes the circumstance to the same cause as Mr. Meade, namely, the unusual dryness of the weather preventing the birds from obtaining their usual food.—*E. N.*]

*Curious Anecdote of Partridges.*—Last spring, according to our usual practice, we

hatched a nest of partridges' eggs under a hen, and brought the young birds up in our garden. They exhibited a remarkable degree of tameness and familiarity. Though they would not exactly feed out of our hands, they would allow us to sit by them while feeding, with our hands within an inch of them scattering the corn before them; and whenever my wife, who took the chief interest in attending to them, went into the garden, they would come at her call from any spot where they might be, and it was amusing to see them follow her closely as she walked backwards and forwards about the lawn, and they would never leave her so long as she remained in the garden. The room we usually occupy has three windows in a bow, the middle one shuts down to the ground: the birds would come to this window, and if they were not noticed, would tap on the glass to attract attention, and as soon as they were observed, would run round to one of the side windows, from which they were usually fed, and fly upon the window-sill. As the season advanced, several of them strayed away and found other associates up the hill, but four remained constant quite into the month of August, and seemed to get more and more familiar, till one day these likewise disappeared, and seeing nothing of them for a day and a half, we supposed they would return no more. But in the afternoon of the second day, a tapping was heard at the window, and there were the four partridges again; when my wife rose from her chair they ran round to the accustomed window, flew upon the sill, and when she threw up the sash, they flew up to her and fluttered about her face and breast in a most surprising manner, then alighting on the ground, pecked up a few grains of corn which she threw to them, and flew away. Their action was so remarkable that it was impossible to fail being struck with it. Why did these birds come back after a day and a half's absence? Certainly not for food, for they did not peck up a dozen grains; they tapped to obtain notice, and when the window was opened by their kind friend and protector, they fluttered about her face and breast for a few moments and then flew away. It seemed as if they came for no other purpose, and intended by this extraordinary action, and in such dumb show, to take a parting salute and bid farewell. It was just as expressive, and as though they would have said, "We no longer need your care and kind attention; the time has come when we must follow the law of our nature and join our associates and kindred, but we have obtained leave to return once more to thank you for all your care and affection for us when we were motherless and helpless, and to give you one farewell salute." They returned no more.—*J. F. Dawson; The Woodlands, Bedford, April, 1854.*

*Occurrence of Rare Birds at Scarborough.*—I here send you word of the rare birds which have been killed on our coast last month, and which are in my possession. The red-necked phalarope (*Phalaropus hyperboreus*), in mature winter plumage, shot on the North Sands; the common skua (*Lestrnis catarractes*), mature; the glaucous gull (*Larus glaucus*), mature; the velvet scoter (*Anas fusca*), male and fully adult, found on the beach dead; the black redstart (*Phaenicura Tithys*), a male, shot at Filey; the snow bunting (*Emberiza glacialis*); the mountain finch (*Fringilla montifringilla*); the rough-legged buzzard (*Buteo lagopus*): all these rare birds are in first-rate feather.—*Alfred Roberts; King Street, Scarborough, January 5, 1854.*

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*List of Land and Fresh-water Mollusks found near Sevenoaks, Kent.* By R. H. S. SMITH, Esq.

As several local lists of land and fresh-water Mollusca have from time to time appeared in the 'Zoologist,' and have been examined with much interest by many others as well as myself, I have frequently wished to offer my contribution to this interesting department of Natural History. But the unwillingness, which collectors will understand, to publish a list before sufficient efforts had been made to render it complete, has hitherto delayed me, and even now, although the number of species is considerable, I expect future researches to be well rewarded.

A glance may be permitted at the geological character of the district to which my list refers, — always a matter of interest to the collector of inland Mollusca. It lies partly upon the southern aspect of the lower chalk formation, where it unites with the weald clay; and thus presents chalk, chalk-marl, green sand, ironstone, plastic, and other clays: but, owing to the dry nature of much of the soil, many of our Mollusca are but thinly represented. The small river Darent is distant about two miles, and, with the ditches near it, has afforded several species. A few have been obtained from a wider range. The nomenclature is that of Gray's edition of 'Turton's Manual.'

*Bithinia tentaculata.* Frequent in ditches near the Darent.

„ *ventricosa.* The Medway, near Maidstone.

*Valvata piscinalis.* The Darent and ditches near it; not abundant.

„ *cristata.* Same localities; rare.

*Arion ater.* Common, exhibiting the usual varieties of size and colour.

„ *hortensis.* Not so frequent as the last.

*Limax maximus.* Not uncommon.

„ *agrestis.* Common.

*Vitrina pellucida.* Frequent. I have one specimen considerably larger than ordinary, not transparent, and exhibiting a pearly lustre within.

*Helix aspersa.* Abundant.

„ *hortensis.* Abundant. Varying much in colour and markings, yet preserving the distinctions which seem to separate it from

*H. nemoralis*; although the opinion of Forbes and Hanley is against the existence of specific difference between the two.

*Helix nemoralis*. Frequent, especially on the chalk; varying, as elsewhere, in colour and number of bands.

„ *Pomatia*. On the chalk, frequent.

„ *arbustorum*. Local, and not common.

„ *lapicida*. Rather frequent, more so on the chalk-hills, at the roots of hedges, &c.

„ *pulchella*. Well diffused and plentiful in some localities; the var. *costata* is also to be found here.

„ *Cantiana*. Very common.

„ *fulva*. Not uncommon, though rather local; under decaying wood among damp moss.

„ *aculeata*. Rather well diffused, but not common.

„ *sericea*. Scarce.

„ *hispidula*. Abundant; varying in colour and the elevation of the spire, but the thick yellowish white foot of the animal seems to afford a good point of distinction between it and the following.

„ *concinna*. Less frequent. I have collected this shell in many localities, from the neighbourhood of London, in Sussex, in Kent, also in Ireland, and have found the characteristics of the animal, its dark colour, the foot narrower and far less fleshy than the last, well preserved in all.

„ *rufescens*. Common; the white variety is also not unfrequent.

„ *virgata*. Unequally distributed through the district; common on the chalk.

„ *caperata*. Local, and less frequent than the last.

„ *depilata*. Rare and local. Marant's-court Hill.

„ *ericetorum*. Very abundant on the chalk.

*Zonites rotundatus*. Very common here, as in almost every other district I have searched. I have found the somewhat rare, transparent, and colourless variety.

„ *pygmæus*. Rare; Knole Park.

„ *allarius*. Very frequent; occasionally colourless, or of a transparent greenish hue.

„ *cellarius*. Frequent, but not large; sometimes colourless.

„ *nitidulus*. Abundant.

„ „ var. *Helmii*. Rare.

„ *lucidus*. One locality; the bank of a slow stream, near Bradbourne.



*Zonites crystallinus*. Rather common.

„ *purus*. Less frequent than the last.

*Succinea putris*. Well distributed, but usually of small size.

*Bulimus obscurus*. Generally diffused, but not abundant; I have found a few beautiful specimens of the transparent, almost colourless variety.

*Zua lubrica*. Common. Albino var. chalk-hills about Kemsing; rare.

*Azeca tridens*. One locality, and there not plentiful; near Stansted, among moss upon a chalky soil: of this also I possess one albino specimen.

*Achatina acicula*. A few localities, but rare.

*Pupa umbilicata*. This shell, abundant in other districts which I have examined (especially near St. Leonard's), is here rare; as yet I know but one locality,—the Vine Lodge, where it was shown me by Alfred Northey, Esq.

„ *marginata*. Rare; found by Lady A. Pratt, at Marant's-court Hill.

„ *pygmæa*. Rare; Knole Park, and single specimens in two other localities.

„ *palustris*. Moss near the Darent, not common; I have found specimens attached with other shells to the cases of caddis worms.

*Balea perversa*. Rather frequent on decaying beech-trees in Chance Wood, Wildernes Park.

*Clausilia bidens*. Well diffused, but not generally abundant; most frequent on the chalk at the roots of hedges, &c. I have taken a few fine examples of the greenish white variety.

„ *Rolphii*. This rare shell is found in two localities in Wildernes Park, but the most diligent search has yielded very few specimens: I obtained it at Hastings, as indicated by Gray; and possess several from Ashurst Park, Tunbridge Wells, collected by H. Field, Esq., jun.

„ *nigricans*. Common; one curious reversed specimen has been found in this district.

*Carychium minimum*. Abundant.

*Acme fusca*. Quarry near Wildernes; very rare.

*Lymnæus pereger*. Common.

„ „ *var. acutus*. Occasional.

„ „ *var. lacustris*. Near the Darent; I also obtained it near St. Leonard's-on-Sea.

*Lymnæus stagnalis*. In the Darent, but more frequently in ditches near the river. In North Holland, and near the Maes, I have observed this shell attain a size quite unknown in British specimens.

„ *palustris*. Frequent; the var. with the violet-brown tinge in the throat occurs also.

„ *truncatulus*. Stream near Kemsing; rare.

„ *glaber*. Medway, near Maidstone.

*Ancylus fluviatilis*. Frequent, in a small stream near Kemsing, and at Bradbourne.

*Velletia lacustris*. Abundant, in two small ponds in Knole Park, on the dead leaves of oak, beech, &c. that have lain some time in the water.

*Aplexus hypnorum*. Slow stream near Kemsing; rare.

*Physa fontinalis*. Ditches near the Darent. I possess one specimen resembling the figure in Turton marked *rivalis*, very much larger than ordinary.

*Planorbis albus*. The Darent; rare.

„ *lævis*. This local shell, which, as far as I am aware, has not previously been found in any south-eastern county, seems confined to one locality here, the same stream that yielded me *Aplexus hypnorum*; but there it is abundant.

„ *imbricatus*. Plentiful, in a small pond near the "Grove;" scarce elsewhere.

„ *marginatus*. Common.

„ *vortex*. Local.

„ *spirorbis*. Common.

„ *contortus*. Stream near Kemsing and near the Darent.

„ *nitidus*. Ponds in Knole Park.

*Cyclostoma elegans*. On the chalk, in extraordinary numbers, more frequently without the dark markings.

*Cyclas cornea*. Very common.

„ *rivicola*. Medway, near Maidstone; found by H. Field, Esq., jun.

*Pisidium nitidum*. Not uncommon in one small pond near Wil-  
dernes Park.

„ *pusillum*. Locally abundant.

„ *pulchellum*. Frequent in a stream near Kemsing.

„ *annicum*. In the Darent.

*Anodon Cygneus*. Abundant, in a pond at Fairlawn, and found in the Darent.

*Unio tumidus*. This shell is abundant in large ponds near Bayham Abbey, Tunbridge Wells, and also in the Thames, but I have not yet found it nearer to my district.

R. H. S. SMITH.

Wilderness Park, Sevenoaks, Kent,  
April, 1854.

*Note on Gluphisia crenata*.—The larva taken by me at Halton, on the 18th of August, 1853, and supposed to be *G. crenata*, produced that insect on the 4th of March last, and which was exhibited by Mr. Douglas at the April meeting of the Entomological Society—*Joseph Greene*; 49, *Stephen's Green, Dublin, April 15, 1854*.

*Note on Notodonta cucullina*.—A fine female made its appearance on the 14th of this month.—*Id.*

*Early appearance of Cucullia Chamomillæ*.—In the autumn of last year I captured, on *Anthemis arvensis*, four larvæ of this uncommon species; one made its appearance yesterday, the 26th instant, and is a very fine specimen. Westwood names May and June as the usual time of their appearing.—*W. H. Hayward*; *Devonport, Devon, January 27, 1854*.

*Irregularity of the appearance of Cucullia Chamomillæ*.—Since my communication of the 27th of January, I had another specimen emerge on February 26th, and a third on April 10th. Why I deem this worthy of remark, is, that the larvæ of the whole descended within a day or two of each other.—*Id.*; *April 11, 1854*.

*Capture of Cheimatobia borearia near Great Marlow, Buckinghamshire*.—Walking through Rudgely Wood, two miles from Marlow, one day last November, I observed some moths at rest on the trunks of beeches, of which the wood is almost exclusively composed. Thinking they were *Dilutaria*, though small specimens, and paler than usual, I pinned two or three into my hat, rather to prove to a young entomologist that moths might be taken at rest on a frosty morning, than with any other purpose. On examining them, however, at home, I found they were *C. borearia*. I returned a few days after to search for the birches, on which I had been told that *C. borearia* constantly feeds; to my surprise, there seemed to be hardly a birch in the wood, and a suspicion crossed my mind, that the insect might prove after all not to be a strict birch-feeder. This impression was strengthened, a few days after, by finding more specimens of *C. borearia*, in casually walking through the beech-woods of Stonor Park, eight miles from here, where I was told there were no birches at all near. I do not vouch, however, for the accuracy of this information. Some of the specimens were soon after sent to an esteemed friend and correspondent in the North, who is in the habit of taking the insect there; and he pronounced them not only to be *C. borearia*, but finer and larger than those usually taken in that part of the country, and more resembling those of the Continent.—*Bernard Smith*; *Great Marlow, Bucks, January 9, 1854*.

*Larva and Transformation of Ochsenheimeria Birdella*.—About the beginning of May the Holci, or soft grasses, have attained a length of some few inches, and in the stems of these feed the larvæ of *Ochsenheimeria Birdella*. Care must be taken in extracting them from the ground. The grass should be seized as low down as possible,

else the caterpillar is very liable to be crushed. The mode of ascertaining whether anything be in the grass, is by noticing whether the centre leaf be discoloured, *not* mined. Of course, if the larva has just taken possession of its new home, the discolouration may not be discernible, and it is therefore necessary to examine all the plants. If, on opening any of them, there should be a pale buff larva, slightly attenuated at each end, and with a minute spot on the anterior edge of each segment just above the spinacles, you have the object of your search. It grows to about half-an-inch in length, and changes about the middle of May: the perfect insect coming forth in the beginning of July. The chrysalis is pale brown, enclosed in a snow-white cocoon.—*John Scott; Ferry Road, Renfrew, February 28, 1854.*

*Note on Colletes Daviesana.*—When in Cumberland last July, I found some cocoons protruding from a bank, and quite exposed to the vicissitudes of the weather, from the sandy soil having been excavated beneath. These I brought home with me, and in August following, bred from them three females and one male of *Colletes Daviesana, Kirby*. A host of small parasitical Hymenoptera made their appearance a few days earlier than the *Colletes*, but I am quite ignorant of their generic or specific names. The cocoons were brownish, rather thick, of a firm texture, and enclosed, end to end, in an outer envelope, of a dirty white colour, somewhat resembling fine tissue paper.—*Thomas John Bold; Angas' Court, Bigg Market, Newcastle-on-Tyne, February 7, 1854.*

*Capture of Andrena analis in Cumberland and Northumberland.*—I found a colony of *Andrena analis, Panz.*, in a sandy hedge-row, partially covered by heath, near Naworth Castle, Cumberland, and another in a similar locality, a little below Featherstone Castle, Northumberland, in July last. The females were most abundant, and were captured as they entered their burrows, whilst the males were enjoying themselves on the flowers of *Hieracium* near by. The first colony had a western, and the last an eastern exposure. I took a few specimens of *Nomada flavoguttata*, entering the burrows of the *Andrena*; perhaps it is parasitical upon the species.—*Id.*

*Capture of Andrena coitana (Kirby), in Cumberland.*—This species, like *A. analis*, is a dweller in upland regions, where it is found in warm sheltered nooks near the water; *A. analis*, on the contrary, preferring high unsheltered situations. The males begin to appear towards the end of June, and the females a week or two later. I found both sexes on the banks of the river Irthing, a little below the Wall-holme. The females frequent the flowers of *Hieracium* and brambles, preferring the latter; the males are sometimes found with their partners, but are to be taken in most abundance by examining the flowers of *Campanulæ* towards evening, and early in the morning, where they will be found asleep, coiled about the pistil. Although the sexes were in plenty, I was unable to trace them to their nidi, which I fancy are not far from the water; for although I sometimes got males upon the hill-sides, yet I never found females but in the hollows. One female has a *Stylops* protruding from its abdomen.—*Id.*

*Capture of Andrena æstiva (Smith), in Cumberland.*—I took in July about half-a-dozen males in the same locality as *A. coitana*; they frequented the same flowers, and, like the male of that species, often sleep in the smaller *Campanulæ*. The specimens were in such good order, that I think the females had not appeared. This species, like *A. analis*, emits a very pungent odour, resembling garlic, when laid hold of.—*Id.*

*Note on Anobium paniceum.*—The same grocer from whom I got the *Ulcma*, had



a quantity of Italian macaroni destroyed by *Anobium paniceum*, *Linn.* It was breeding freely, and had burrowed to such an extent in the macaroni, as to render it completely worthless before the mischief was discovered. From their first nidi they have wandered over the whole shop, and are now found wherever farinaceous substances are kept.—*Id.*

### Catalogue of Coleoptera found in the Neighbourhood of Dublin.

By A. R. HOGAN, Esq.

(Concluded from page 4199).

- |                                                                           |                                                                         |
|---------------------------------------------------------------------------|-------------------------------------------------------------------------|
| <i>Leiopus nebulosus</i> , <i>L.</i> Rathfarnham, &c.; on chestnut-trees. | <i>Haltica cærulea</i> , <i>Pk.</i> Phoenix Park; on flags.             |
| <i>Rhagium bifasciatum</i> , <i>F.</i> Powerscourt.                       | „ <i>ferruginea</i> , <i>Schr.</i> Roebuck, Firhouse, &c.               |
| <i>Strangalia elongata</i> , <i>Ste.</i> Ditto.                           | „ <i>flava</i> , <i>Ste.</i> Local.                                     |
| <i>Grammoptera ruficornis</i> , <i>F.</i> Ditto.                          | „ <i>Helxines</i> , <i>F.</i> Firhouse, &c.; on willows.                |
| „ <i>lævis</i> , <i>F.</i> Glasnevin, &c.; on Umbelliferæ.                | „ <i>oleracea</i> , <i>L.</i> Dodder banks.                             |
| <i>Donacia cincta</i> , <i>Germ.</i> Botanic Garden at Glasnevin.         | „ <i>Moderi</i> , <i>F.</i> Portmarnock?                                |
| „ <i>crassipes</i> , <i>F.</i> Taken by Mr. Tardy.                        | <i>Thyamis tabida</i> , <i>Ol.</i> On <i>Senecio Jacobæa</i> .          |
| „ <i>Sagittariæ</i> , <i>F.</i> Portmarnock.                              | „ <i>atricilla</i> , <i>Ste.</i> Local.                                 |
| „ <i>Proteus</i> , <i>Kunz.</i> Glasnevin.                                | „ <i>ochroleuca</i> , <i>Ste.</i> Killiney; on <i>Ononis arvensis</i> . |
| „ <i>Lemnæ</i> , <i>F.</i> Taken by Mr. Tardy.                            | „ <i>larida</i> , <i>Gyl.</i> Common.                                   |
| „ <i>linearis</i> , <i>Hope.</i> Glasnevin; on <i>Sparganium</i> .        | „ <i>holsatica</i> , <i>L.</i> Local.                                   |
| <i>Crioceris cyanella</i> , <i>Ste.</i> Firhouse.                         | <i>Macrocnema Hyoscyami</i> , <i>Ent. Hft.</i> Firhouse?                |
| „ <i>puncticollis</i> , <i>Cts.</i> Ditto.                                | „ <i>marcida</i> , <i>Ill.</i> Portmarnock.                             |
| „ <i>melanopa</i> , <i>Ste.</i> Rathfarnham Park.                         | „ <i>exoleta</i> , <i>Ste. (Mant.)</i> Rochestown; by Mr. Molloy.       |
| <i>Cassida rubiginosa</i> , <i>Ill.</i> Dodder banks?                     | „ <i>chrysocephala</i> , <i>L.</i> Taken by Mr. Tardy.                  |
| <i>Galeruca Tanacetii</i> , <i>L.</i> Taken by Mr. Tardy.                 | „ <i>Rapæ</i> , <i>Ill.</i> Dodder banks.                               |
| „ <i>Cratægi</i> , <i>Dft.</i> ? Local.                                   | <i>Chaetocnema concinna</i> , <i>Ste.</i> Local.                        |
| „ <i>Nymphææ</i> , <i>L.</i> Ditto.                                       | „ <i>aridella</i> , <i>Pk.</i> ? Rare.                                  |
| „ <i>Caprææ</i> , <i>Ste.</i> ? Ditto.                                    | <i>Sphæroderma testaceum</i> , <i>F.</i> Local.                         |
| <i>Haltica Lepidii</i> , <i>Ent. Hft.</i> Glasnevin and Portmarnock.      | „ <i>orbiculatum</i> , <i>Mm.</i> Portmarnock.                          |
| „ <i>Brassicæ</i> , <i>F.</i> Taken by Mr. Tardy.                         | <i>Timarcha coriaria</i> , <i>F.</i> Taken by Mr. Tardy.                |
| „ <i>nemorum</i> , <i>L.</i> Local.                                       | <i>Chrysomela polita</i> , <i>L.</i> Local.                             |
| „ <i>Rubi</i> , <i>F.</i> Ditto.                                          |                                                                         |

- Chrysomela Staphylæa, L.* Local.  
 „ *Banksii, Ste.* Roebuck, &c.; abundant.  
 „ *lamina, F.* Clonskeagh, &c.; scarce.  
*Helodes Beccabungæ, Pz.* Banks of the Dodder.  
 „ *auctus, F.* Taken by Mr. Tardy.  
*Phædon marginella, Ste.* Dodder banks.  
 „ *Vitellinæ, L.* Local.  
 „ *Raphani, F.* On docks; com.  
 „ *Cochleariæ, F.* On cow-parsnips.  
*Coccinella septempunctata, L.* Common.  
 „ *variabilis, Ill.* Ditto.  
 „ *conglomerata, Ste.* Local.  
 „ *quatuordecim-punctata, L.* Near Dundrum.  
 „ *tredecim-punctata, L.* Portmarnock? on willows.  
 „ *octodecim-guttata, L.* Taken by Mr. Tardy.  
*Seymnus discoideus, F.* Portmarnock; very rare.  
*Rhyzobius litura, F.* Baldoyle; abund.  
*Cacicula pectoralis, Ste.* Portmarnock; on dwarf willows.  
*Stene ferruginea, Ste.* Taken by Mr. Tardy.  
*Tenebrio obscurus, F.* Dublin; in stables.  
*Phylan gibbus, F.* Portmarnock.  
*Crypticus quisquilius, Pk.* Ditto.  
*Blaps mortisaga, Ste.* Dublin; in cellars and stables.  
*Helops striatus, Ste.* Taken by Mr. Tardy.  
*Lagria hirta, L.* Portmarnock and Killiney.  
*Melandrya caraboides, L.* Malahide; taken by Dr. Lloyd.  
*Anaspis frontalis, L.* Phœnix Park; on hawthorn flowers.  
 „ *ruficollis, Gffry.* Same locality.  
 „ *obscura, Gyl.* Same locality.  
*Proscarabæus violaceus, Mm.* Roebuck, Merriam, &c.; very uncertain in its appearance.
- Proscarabæus vulgaris, Ste.* Portrane sds.  
*Ischnomera melanura, Ste.* Glasnevin Botanic Gardens; on *Scrophularia*  
*Anthicus floralis, F.* Powerscourt.  
*Seydmænus tarsatus, Müll.* Taken by Mr. Tardy.
- 
- Pselaphus Heisii, Hbst.* Malahide Hill.  
*Euplectus Karstenii, Rchb.?* Local.  
*Autalia rivularis, Grav.* Portmarnock, &c.  
 „ *impressa, Ol.?* Local.  
*Falagria sulcata, Pk.* Portmarnock, &c.  
*Calodera nigricollis, Pk.* Malahide.  
*Tachyusa atra, Grav.* Dodder banks.  
*Astilbus canaliculatus, F.* Portmarnock, &c.; common.  
*Polystoma obscurella, Ste.* Portmarnock and Malahide.  
*Calicerus obscurus, Ste.* Same locality.  
*Bolitochara circellaris, Grav.* Malahide; very common.  
 „ *analisis, Grav.* Ditto.  
 „ *socialis, Pk.* Local.  
*Oligota subtilis, Er.* Ditto.  
*Encephalus complicans, Wwd.* Portmarnock; rare.  
*Aleochara fuscipes, Grav.* Not uncommon.  
 „ *nitida, Grav.* Portmarnock.  
 „ *lanuginosa, Gyl.* Local.  
 „ *mæsta, Grav.* Ditto.  
*Oxypoda opaca, Grav.* Portmarnock?  
*Diglossa mersa, Hal.* Baldoyle; for description of exact locality, &c., see 'Zoologist,' (Zool. 3464). Subsequent experience has, however, convinced me that the insect is much more abundant than might be supposed from the account there given.  
*Tachyporus thoracicus, Ste.* Local.  
 „ *chrysomelinus, L.* Ditto.  
 „ *marginellus, Ste.* Ditto.  
 „ *Hypnorum, F.* Everywhere.  
*Hypocypus laviusculus, Ste.* Portmarnock; on the bent-grass.  
*Conurus pubescens, Grav.* Local.  
 „ *pedicularius, Grav.* Killiney, &c.

- Megacronus analis*, *Ste.* Local.  
*Tachinus silphoides*, *L.* On dunghills.  
     " *marginellus*, *F.* Local.  
     " *subterraneus*, *L.* Phœnix Park?  
     " *elongatus*, *Gyl.* Chapelizod  
         Glen.  
     " *rufipes*, *Ste.* Not uncommon.  
*Creophilus maxillosus*, *L.* On carcasses.  
*Trichoderma pubescens*, *Deg.* Abundant.  
*Staphylinus erythropterus*, *Ste.* Ditto.  
     " *castanopterus*, *Ste.* Local.  
     " *æneocephalus*, *Ste.* Ditto.  
*Goërius olens*, *Müll.* Frequent.  
*Ocypus similis*, *F.* Local.  
*Quedius tristis*, *Grav.* Dalkey.  
     " *impressus*, *Pz.* Portmarnock;  
         common.  
     " *discoideus*, *Ste.* Local.  
*Raphirus semiobsecurus*, *Ste.*? Ditto.  
     " *boops*, *Grav.* Ditto.  
*Philonthus splendens*, *F.* College Park.  
     " *politus*, *L.* Frequent.  
     " *marginatus*, *F.* Ditto.  
     " *sanguinolentus*, *Grav.* Port-  
         marnock.  
*Cafius xantholoma*, *Ste.* Baldoyle, &c.;  
     on the sea-sands.  
     " *fucicola*, *Ste.* Killiney, &c.  
*Gabrius aterrimus*, *Grav.* On the sea-  
     coast.  
*Remus sericeus*, *Ste.* Malahide.  
*Othius fulvipennis*, *F.* Local.  
     " *melanocephalus*, *Grav.* Ditto.  
     " *læviusculus*, *Ste.* Ditto.  
*Xantholinus glabratus*, *Grav.* Scarce.  
     " *punctulatus*, *Pk.* Baldoyle.  
     " *linearis*, *Ol.* Local.  
*Leptacinus parumpunctatus*, *Gyl.* Dung-  
     hills.  
     " *batychrus*, *Gyl.*? Local.  
*Lathrobium brunnipes*, *Grav.* Phœnix  
     Park?  
     " *fulvipenne*, *Grav.* Same lo-  
         cality?  
     " *elongatum*, *L.* Local.  
     " *multipunctatum*, *Grav.* Do.  
     " *angusticollis*, *Boisd.* A speci-  
         men by the Dodder, near Fir-house.  
*Sunius ochraceus*, *Grav.* Dodder banks.  
*Astenus angustatus*, *Pk.* Malahide.  
*Rugilus rufipes*, *Er.* Local.  
     " *orbiculatus*, *Er.* Ditto.  
     " *affinis*, *Er.* Ditto.  
*Stenus guttula*, *Müll.* Dodder banks and  
     Loughlinstown.  
     " *Juno*, *Ste.* Common.  
     " *bupthalmus*, *Grav.*? Ditto.  
     " *nitidus*, *Er.*? Ditto.  
     " *speculator*, *Er.* Ditto.  
     " *pumilio*, *Er.* Ditto.  
     " *unicolor*, *Er.* Ditto.  
     " *Aceris*, *Ste.* Ditto.  
     " *picipes*, *Ste.* Ditto.  
     " *tarsalis*, *Ste.* Local.  
     " *oculatus*, *Grav.* Everywhere.  
*Bledius tricornis*, *Hbst.* North Bull  
     Sands, &c.  
*Hesperophilus arenarius*, *Pk.* Baldoyle  
     and Portmarnock.  
*Phytosus spinifer*, *Ste.* One specimen on  
     Portrane Sands.  
*Platysthetus morsitans*, *Pk.* Local.  
*Oxytelus rugosus*, *F.* Ditto.  
     " *nitidulus*, *Grav.* Ditto.  
     " *piceus*, *L.* Common.  
     " *sculpturatus*, *Grav.* Ditto.  
     " *depressus*, *Grav.* Ditto.  
*Megarthus depressus*, *Pk.* Local.  
*Proteinus atomarius*, *Er.* Portmarnock;  
     rare.  
     " *brachypterus*, *F.* In putres-  
         cent agarics.  
*Phlæobium clypeatum*, *Müll.*? Local.  
*Omalium deplanatum*, *Gyl.* On a win-  
     dow, in Dublin.  
     " *rivulare*, *Grav.* Common.  
     " *subpubescens*, *Ste.* Phœnix  
         Park; abundant on furze.  
*Deleaster dichrous*, *Grav.*? Taken by  
     the late J. Egan, Esq.  
*Thinobius longipennis*, *Heer.* Near Fir-  
     house; by the Dodder.  
*Trogophlæus pusillus*, *Grav.* Dodder  
     banks.  
*Lesteva obscura*, *Pk.* Ditto?

In the course of publication it has unavoidably become necessary to make the following additions and corrections.

## ADDENDA.

Page 4135. *After Trechus fulvus, insert*

*Blemus pallidus, Ste.*, (*Trechus labidosus, Dawson*). Of this local species I captured a specimen on the beach at Killiney; it has also been taken by Mr. Haldy, at Hollywood, Co. Down.

Page 4136. At foot of second column, *insert*

*Limnius variabilis, Ste.* Loughlinstown?

*Elmis parallelopipedus, Müll.* Dodder.

„ *Volkmar, Pz.* Enniskerry.

Page 4197. *After Melolontha vulgaris, insert*

*Melolontha Hippocastani, F.* Roebuck; taken by James Haughton, Esq.

*Melanotus rufipes, Hbst.* Taken by Mr. Tardy.

Page 4198. *After Ellescus scanicus, Ph., insert a note of interrogation (?)*.

## CORRIGENDA.

Page 4135. *Dele Agonum Bogemanni, Ste.*

Page 4136. *For Elaphrus riparius, L., &c., read*

*Elaphrus cupreus, Dj.* Glen near Ticknock; by R. H. S. Smith, Esq.

*After Helophorus griseus, Hbst. Local: insert*

*Helophorus nubilus, F.* Clontarf; by Miss M. Ball. It is to this species, and not to the preceding, that the note respecting the variety should be appended.

Page 4197. *Dele Aplotarsus rufipes, F.*

On the Catalogue thus concluded there is little to remark, save the absence of many species usually common in similar localities, which constant observation during the past half century has failed to discover, and few of which I think likely to be brought to light hereafter, notwithstanding Mr. Douglas's very encouraging remarks on "Terra Incognita." We have hardly anything to compensate us in the way of species considered rare or local in other parts of the British Isles, with the exception, perhaps, of *Trechus labidosus*, *Heterocerus femoralis*, *Lathrobium angusticolle*, *Thinobius longipennis*, and two or three more; even *Diglossa mersa* is no longer peculiar to the Irish coast, having been taken in large numbers on the coast of France, in the year 1852, by Messrs. Blanchard and Signoret, and in Scotland by M. Javet. In one genus only have we more than the proportion of species that might be expected, namely, *Cercyon*;



the thirteen species of which, acknowledged as European, have all been found in Ireland, and eleven within the limits of the County Dublin.

That other collectors, however, of whose existence I may be as yet unaware, have taken more, and possibly remarkable species not known to me as occurring in the neighbourhood, I would not wish to seem to doubt, and I hope they will not fail to make their discoveries public, either by sending notices of them to the 'Zoologist,' or, if they prefer it, communicating them to me for a future Appendix: thus may the very imperfections of the present list tend to the advancement of science, and to the encouragement of new votaries to the study, who, if they would reap the highest and best fruit of their labours, will not forget, I trust,—

"To trace in Nature's most minute design  
The signature and stamp of Power Divine,  
Contrivance intricate, expressed with ease,  
Where unassisted sight no beauty sees,  
The shapely limb and lubricated joint,  
Within the small dimensions of a point;  
Muscle and nerve miraculously spun,  
His mighty work, who speaks and it is done;  
The Invisible in things scarce seen revealed,  
To whom an atom is an ample field."

*Cowper.*

So will the lover of Entomology, whom the cheering fragrance of returning spring once more tempts to ramble forth from the scenes of his winter labours, soon find his way—

"To regions where, in spite of sin and woe,  
Traces of Eden are still seen below,  
Where mountain, river, forest, field, and grove,  
Remind him of his Maker's power and love."

*Cowper.*

A. R. HOGAN.

Charlton, Dundrum, near Dublin,  
February, 28, 1854.

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*Note on Ophiocoma Ballii.*—Since my former notice of this species, I have seen a very perfect specimen in the possession of Mr. Edwards, of Banff, having six distinct and fully developed rays.—*George Harris ; Gamrie, April, 1854.*

*Note on Uraster hispida.* — Being in the way of supplementing deficiencies, allow me to correct an error in my notice of the little cross-fish (Zool. 3305), where, referring to the number of rays, *four* is printed in place of *five*.—*Id.*

NOTICES OF NEW BOOKS.

'*The Annals and Magazine of Natural History.*' No. 76, dated April, 1854; price 5s.: and No. 77, dated May, 1854; price 2s. 6d. London: Taylor & Francis, Red Lion Court, Fleet Street.

The contents of the April number are as follows: —

'On the Structure of the Echinoderms.' By Joannes Müller.

'Description of a new Species of Closterium, (*Closterium Griffithsii*).' By the Rev. M. J. Berkeley, M.A., F.L.S.

'Notes on the Ornithology of Ceylon, collected during an Eight Years' Residence in the Island.' By Edgar Leopold Layard, F.Z.S., C.M.E.S., &c.

'Monograph of the British Graphideæ.' By the Rev. W. A. Leighton, B.A., F.B.S.E.

'A Reply to two Statements published by the Palæontographical Society, in their volume for 1853; one appearing to accuse the University of Cambridge of illiberality in the administration of its Museum; the other reflecting on Professor M'Coy.' By the Rev. Professor Sedgwick, M.A., F.R.S., &c.

'Notice of the Discovery of Desmarestia Dresnayi on the Coast of Ireland.' By R. K. Greville, LL.D., &c.

'On the Mechanism of Aquatic Respiration, and on the Structure of the Organs of Breathing in Invertebrate Animals.' By Thomas Williams, M.D. Lond.

'Contributions to the Palæontology of Gloucestershire: — A Description, with Figures, of some new Species of Echinodermata from the Lias and Oolites.' By Thomas Wright, M.D., &c.

Bibliographical Notices: — 'Botanical Letters to a Friend.' By Dr. F. Unger. Translated by Dr. Paul. 'Synopsis des Caloptérygines.' Par M. E. de Selys-Longchamps.

Proceedings of Learned Societies: — Royal Institution of Great Britain—Zoological—Botanical of Edinburgh.

Miscellaneous: — Note on the Vegetation of Mount Argæus in Cappadocia; by M. P. de Tchibatcheff. On certain Statements contained in Dr. T. Williams's paper on the Respiratory Organs of the

Articulata ; by George Newport, F.R.S. On the Genera *Volutella* and *Cymbeola* ; by Dr. J. E. Gray. Observations on *Notamia bur-saria* ; by G. H. Kingsley, M.D. Description of a new Species of *Helix* from Van Diemen's Land ; by Lovell Reeve, F.L.S., &c. On the Colours of Plants ; by M. Martens: extracted from the 'Bulletins de l'Acad. Royale de Bruxelles,' vol. xx. pt. 1, p. 232.

The paper by Professor Sedgwick, with its elaborate title, contains not one word of instruction for the naturalist. Messrs. Selby, Johnston, Babington and Balfour have doubtless been seduced into the publication of these 12 pages, thinking the Professor's name a great "catch," and well worth the extra 2s. 6d. charged for this number. How exactly was this the case with Mr. Loudon, in the once admirable old 'Magazine of Natural History,' in the memorable Vigors and Swainson controversy ! It was first announced with a "Look here!" then it was treated as mere respectable matter ; then the combatants were requested to be brief ; then it was made an Appendix matter ; and finally, the combatants were stopped by being told that they must carry on the war at their own cost. We trust the Sedgwick controversy will reach that "lame and impotent conclusion," without passing through the intermediate stages.

The late Mr. Newport's brief communication deserves our thanks, although we think it a little too acid. "I have observed," says Mr. Newport, "with surprise and regret, such a mass of erroneous statements in the papers now publishing in the 'Annals' on the respiratory organs of the Articulata, by Dr. T. Williams, that I write at once to say, that at a future period, at my earliest convenience after Dr. Williams has completed his remarks on the subject of the blood and the respiratory structure, I shall feel myself called upon to beg for space in your journal to attempt to remedy the injury which these errors are likely to inflict on science by their promulgation." Approving as we do of Mr. Newport's censures on the publication of such a paper, a reply is quite unnecessary. We should think that very few are sufficiently read in the internal anatomy of insects, to relish so diffuse a paper ; and those who are, will not require that its short-comings should be pointed out to them.

The May number contains the following papers : —

'A Synopsis of the Fissirostral Family Bucconidæ.' By Philip Lutley Selater, M.A., F.L.S.

'Observations on the Fauna of Barrackpore.' By Captain Robert C. Tytler, of the 38th Regiment Bengal Light Infantry.

‘Contributions to the Palæontology of Gloucestershire:—A Description, with Figures, of some new Species of Echinodermata from the Lias and Oolites.’ By Thomas Wright, M.D., &c.

‘Observations on Professor Sedgwick’s “Reply to some Statements reflecting on the University of Cambridge.” By J. S. Bowerbank. F.R.S.

‘Monograph of the British Graphideæ.’ By the Rev. W. A. Leighton, B.A., F.B.S.E.

‘Notices of British Fungi.’ By the Rev. M. J. Berkeley, M.A., F.L.S., and C. E. Broome, Esq.

‘Descriptions of new Species of Ceylon Reptiles.’ By Dr. Kelaart.

‘A Revision of the Arrangement of the Families of Bivalve Shells, (Conchifera).’ By John Edward Gray, Ph.D., F.R.S., V.P.Z.S., &c.

‘On the Reproduction of a lost part of an Operculum, and of its probable Restoration when entirely destroyed.’ By John Edward Gray, Ph.D., F.R.S., V.P.Z.S., &c.

Proceedings of Societies:—Linnean.

Miscellaneous:—Runcina Hancocki; by Dr. J. E. Gray. Note on the Coloration of the Chinese Sea; by M. Camille Dareste.

Mr. Bowerbank’s “Observations,” like those which have called them forth, contain no Natural-History matter; but in three pages the writer utterly demolishes Professor Sedgwick’s elaborate “Reply.” No counter-pleading can remove the impression conveyed by Mr. Bowerbank’s “Observations.”

‘Transactions of the Entomological Society of London.’ New Series.

Vol. II., Part 8. Demy 8vo., with 2 plates. Price 4s. London: Longman. 1854.

This part contains the following papers:—

‘On the Insects used for Food by the Indians of the Amazon.’ By A. R. Wallace, Esq.

‘Descriptions of some new Species of Butterflies from South America.’ By W. C. Hewitson, Esq.

‘Notes on the Habits of a Bee-parasite, Melittobia Acasta.’ By Frederick Smith, Esq.

‘On the Habits of the Butterflies of the Amazon Valley.’ By A. R. Wallace, Esq.



Mr. Wallace's paper on insects used as food is highly interesting. After stating that insects afford the Indians some of their greatest luxuries, he thus particularizes the species.

"The first is a great-headed red ant, the *Æcodoma cephalotes* of Latreille. This insect inhabits the whole Amazon district, and, I believe, a great part of Brazil and Guiana, and is one of the most destructive of the whole family. It frequents sandy districts, and places where 'red earth' is found, but is absent from the 'black earth,' or the rich alluvial soil of the Amazon. It forms its nests in the woods and in gardens, turning up the soil in such large heaps as to make one doubt whether so small an insect could have been the workman. I have seen elevations of this kind twenty feet square and a yard high, containing many tons of earth. These hillocks are riddled with holes in every direction, and into them the ants may be seen dragging little circular pieces of leaf, which they cut off from particular trees which they prefer; orange-trees and leguminous shrubs suffer most from their ravages, and these they will sometimes entirely strip of their leaves in a night or two. Young plants, too, of every kind suffer very much, and cannot be grown in many places on account of them. They remain in one locality a long time; for on my observing to a gentleman at a cattle-estate near Pará, how remarkably the track of these ants was worn down across a pathway and through grass, he informed me that he had observed them marching along that very track for fifteen or twenty years. The insects which do this are, of course, the neuters, which have tremendous jaws. They often swarm in houses at night, crawling over the supper-table, and carrying away fragments of bread and farina; and should any cloth or handkerchief be left on the ground, especially with anything eatable in it, it will be found in the morning cut into semicircular holes in every direction as neatly as if done with scissors. It is the female of this destructive creature that furnishes the Indian with a luxurious repast. At a certain season the insects come out of their holes in such numbers, that they are caught by basketsfull. When this takes place in the neighbourhood of an Indian village, all is stir and excitement; the young men, women, and children go out to catch *saúbas* with baskets and calabashes, which they soon fill; for though the female ants have wings, they are very sluggish, and seldom or never fly. The part eaten is the abdomen, which is very rich and fatty, from the mass of undeveloped eggs. They are eaten alive; the insect being held by the head, as we hold a strawberry by its stalk, and the abdomen being bitten off, the body, wings and legs are

thrown down on the floor, where they continue to crawl along apparently unaware of the loss of their posterior extremities. They are kept in calabashes or bottle-shaped baskets, the mouths of which are stopped up with a few leaves, and it is rather a singular sight to see for the first time an Indian taking his breakfast in the *saüba* season. He opens the basket, and as the great-winged ants crawl slowly out, he picks them up carefully and transfers them with alternate handfuls of farina to his mouth. When great quantities are caught, they are slightly roasted or smoked, with a little salt sprinkled among them, and are then generally much liked by Europeans.

"The next insect in the list is the *Termes flavicolle*, *Perty*; a large white ant common in the Upper Amazon. It inhabits holes in the earth about the roots of rotten trees, and is much sought after for food by the great ant-eater (*Myrmecophaga jubata*), as well as by the Indians. In this case it is not the winged female that is eaten, but the great-headed, hard-biting worker, and it is by means of his jaws that the creature is entrapped. An Indian boy going after *cupim*, takes with him a calabash or a bottle basket, and searches about for a nest. He then scrapes away some of the earth, and taking a long piece of grass inserts it as far as it will go, and on withdrawing it, finds ten or a dozen *Termes* holding tightly on to it; and he repeats this operation till he fills his basket. These insects are also eaten alive or roasted; but in this case it is not the abdomen, but the enormous head and thorax which is devoured, as those parts contain a considerable mass of muscular matter. These insects have generally a bitter taste, and are not much esteemed except by the Indians themselves.

"The edible Homopterous insect is the *Umbonia spinosa*, which swarms at certain seasons on the *Inga* trees, which are universally planted by the Indians near their cottages, for the sake of the fruit, which is much esteemed by them. The insects fall upon the ground in great numbers, and the sharp spine on their thorax renders walking barefoot very disagreeable. This spine seems to render them very ill adapted for food, but when they first appear the whole body is soft and flaccid, and they are then collected and roasted in a flat earthen pan. They are not, however, so much esteemed as the other insects I have mentioned.

"The next edible insect I shall allude to is the larva of a beetle, but of what species or genus I am unable to say, though it is probably a *Calandra*, as it is found in the stem of a palm-tree. It is much swollen, and attenuated at each end; and is a rich fatty mass, which

is eaten slightly roasted or fried. It is not by any means so common in the Amazon as the other edible insects; and in fact, I never saw it eaten, or ate it myself, but once. It is called *muxeiwa* by the Indians.

"The Apterous insect which is eaten by the South-American Indians, more, I presume, as a delicacy than as an article of food, is a species of *Pediculus* which inhabits the heads of that variety of mankind, and is probably a distinct species from that of our own country. The method of capturing and devouring this insect is exactly the same as that which every one has seen adopted by the monkeys at the gardens of the Zoological Society. A couple of Indian belles will often devote a spare half-hour to entomological researches in each other's glossy tresses, every capture being immediately transferred, with much gusto, to the mouth of the operator."—P. 242.

The butterflies described by Mr. Hewitson are *Erycina Saundersii*, *Acraea Amida*, *Papilio Conon*, *Hætera Hortona*, *Hætera Hypesia*, and *Dircenna Duillia*: all of them are very beautifully figured.

The papers by Mr. Smith on *Melittobia*, and by Mr. Wallace on the butterflies of the Amazon, are replete with interest.

*'Monograph of the Psychidæ.'* By M. BRUAND.

This admirable Monograph forms part of the '*Mémoires de la Société libre d'Emulation du Doubs*,' but we learn from the wrapper that it is also published separately, with the plates either coloured or plain; copies of the former are charged 7 francs each, of the latter, 9 francs each.

This is one of those careful and elaborate treatises which are now becoming common on continental Europe, but which are unfortunately so rare here. Probably a cause for this may be found in the paucity of students here; for, with a very few exceptions, all monographs published in this country entail so large a pecuniary loss on their proprietors, that it can scarcely be a matter of surprise that they should be few in number and imperfect in execution. May we not, however, as authors, seek in ourselves a cause for this want of success? May we not fairly attribute the want of sale to the imperfection of our own handywork? Is it not notoriously the case, that when a painstaking man, who is master of his subject, undertakes such a monograph, that it is highly remunerative? As monographs, those



by Mr. Yarrell of our British birds and British fishes are most admirable; and when we see that second and enlarged editions of these works are called for, we have unquestionable evidence that the public does perceive and appreciate what is excellent: and we are half inclined to conclude that the want of encouragement of which we so loudly complain arises from our own negligence. Be this as it may, M. Bruand's 'Monograph of the Psychidæ' is one of the most elaborate and most perfect treatises that has ever issued from the press. The author minutely describes 82 species; he figures the perfect insects of these in every instance, and, in addition, gives 92 figures of larvæ, cases, and other details, and the neurulation of 101 wings. To entomologists it is generally known that M. Bruand regards the Psychidæ as a section of the larger group, Tineina: this view has been flippantly disposed of in this country by expressions of unqualified dissent: this was to be expected from the superficial: one man goes into a field and counts the ears of corn, and when his arduous task is accomplished and the result declared, another, who has just peeped over the hedge, says "I don't agree with you." Again, one man who has devoted half a life to Greek, will talk of "glorious old Homer!" while another, who cannot decipher a Greek letter, "thinks nothing of the Iliad."

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## PROCEEDINGS OF SOCIETIES.

### ENTOMOLOGICAL SOCIETY.

May 1, 1854.—H. T. STANTON, Esq., V.P., in the chair.

#### *Donations.*

The following donations were announced, and thanks ordered to be given to the donors:—The 'Zoologist' for May; by the Editor. The 'Athenæum' for April; by the Editor. The 'Literary Gazette' for April; by the Editor. The 'Journal of the Society of Arts' for April; by the Editor. The 'Proceedings of the Royal Society,' Vol. vii. No. 1; by the Society. The 'Proceedings of the Literary and Philosophical Society of Liverpool,' No. vii.; by the Society. 'Revue et Magasin de Zoologie,' 1854, No. 5; by the Editor, M. Guérin-Ménéville. 'Généra des Coléoptères d'Europe,' par MM. Du Val et Migneaux, pties. 1 et 2; by the Authors.

#### *Election of Members.*

W. C. Dale, Esq., St. Pancras Vicarage, was elected a Member, and Messrs. Wallace and Bates were elected Corresponding Members of the Society.



*Technical Trade Museum.*

It was announced that the Council had resolved that the co-operation and aid of the Society should be given to the "Technical Trade Museum," now forming by the Society of Arts, under the direction of Mr. Solly; and that any duplicate specimens in the Society's collection, of insects beneficial or injurious to man, should be presented to it.

*Exhibitions.*

The Rev. Joseph Greene sent for exhibition a specimen of the rare *Notodonta Cucullina*, bred from a larva found on maple, and *N. trepida*, also reared; both larvæ having been taken at Halton, Bucks, last year.

Mr. Edwin Shepherd exhibited a pair of *Aleucis pictaria*, bred by a collector, who had no recollection of the larvæ.

Mr. Bond exhibited two bred specimens of *Anticlea Berberata*, of which the upper wings differed from each other in marking.

Mr. Douglas exhibited larvæ of *Elachista cerussella*, mining leaves of reeds, and larvæ of a new species of *Elachista* in leaves of *Poa aquatica*. These two kinds of larvæ are much alike; their manner of mining is somewhat similar, although in different plants; they had been considered to belong to one species (Zool. 4142), but the pupæ and perfect insects showed they were quite distinct; and Mr. D. proposed to call the new species *E. Poæ*.

Mr. Stevens exhibited a fine *Notodonta dictæoides*, and a pair of *N. Carmelita*, taken *in coitu*, the female of which was still laying eggs. These insects were captured on the 29th ult. at Shirwood Forest, where Mr. S. also took, under the bark of birch, *Hylecætus dermestoides*, larva, pupa, and imago; the larvæ he observed making transverse galleries in the alburnum. He also exhibited *Elater rufipennis*, *E. balteatus*, *E. crocatus*, *E. sanguineus*, *Ips 4-punctatus*, &c.

Mr. Stainton exhibited some shoots of ash, in which larvæ of *Prays Curtisellus* were burrowing beneath the bark; and stated that these larvæ when young, last October, had mined the leaves of the ash: a figure, by Mr. Wing, of the young mining larva, was also exhibited. Mr. S. observed that Guenée had said of this insect,—"Species incertæ sedis, donec larva latebit;" but he doubted whether the discovery of the larva and its singular habits would tend to remove this uncertainty, as no other larvæ were known to have a similar economy.

Mr. Stainton also exhibited some young shoots of the spindle-tree, which, as they grew, drooped in consequence of a minute larva feeding on the pith; these larvæ, however, soon leave the shoots, and spinning a few leaves together, feed thereon, thus almost reversing the order of things which takes place with *Prays Curtisellus*. He was at present unable to say to what species these larvæ belonged, but he strongly suspected they would produce *Hyponomeuta plumbellus*.

Mr. Stainton also exhibited a new *Lithocolletis* larva, discovered in Scotland by Mr. Scott, in the under side of the leaves of the bear-berry (*Arctostaphylos Uva-ursi*), which was especially interesting, as being another instance of the larvæ of this genus feeding on a low-growing plant.

*Insects at Tunbridge Wells and Dover.*

Mr. Curtis read the following list of insects found at Tunbridge Wells and Dover in 1852:—

"*Rhamphidia longirostris*, *Wied.*, July 6, two females on the borders of a pond in a copse; I could not find the male. The species has not been taken in England before, but it has occurred in Ireland, where also, in company with Mr. Haliday, on the damp and shady rocks on the shores of the Shannon, I took *Geranomyia unicolor*.

*Thalyera sericea*, *Sturm* (*Strongylus ferridus*, *Oliv.*), July 14, off shallows.

*Mylæchus brunneus*, *Lat.*, July 23.

*Quedius rufitarsis*, *Mars.*, August 2, on parsnip-flowers, Dover.

*Latridius nodifer*, *Westw.*, July 3, off a hedge.

*Malachius marginellus*, *Fab.*, July 30, by Ziczac, Dover.

*Miarus Campanulæ*, *Linn.*, July 14, in flowers of *Campanula rotundifolia*.

*Coccinella ocellata*, *Linn.*, July 21, under fir-trees, Eridge Park."

*Entomologists treated as Trespassers.*

The Secretary read a newspaper account of the committal to prison for trial of two poor working entomologists on a charge of setting fire to the furze on Putney Heath. It did not appear from the report that there was any proof that the act was committed by the men, and, as they justly stated, the fire would destroy the insects they sought. A conversation then arose respecting the difficulty experienced by collectors of insects arising from the illiberality of landed proprietors, and their encroachments upon the public right of way, of which some instances were adduced; and it was suggested, whether the Society might not in some degree mitigate the annoyance, by giving its Members a certificate that they were such, and that into woods and such-like places they went only in pursuit of insects.

*Field-study of the Tineina.*

Mr. Stainton laid on the table an invitation to such persons as wished to study the Natural History of the Tineina in the field, to meet at his house every Wednesday evening during the summer, and make an excursion in the neighbourhood.—*J. W. D.*

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DUBLIN NATURAL HISTORY SOCIETY.

February 10, 1854.—Dr. GORDON, M.R.I.A., in the chair.

*Donation.*

Mr. Kinahan presented to the Society two volumes of Pennant's 'British Zoology,' interesting as containing original plates of discoveries in the Zoology of the British Isles.

Mr. Callwell, in proposing a vote of thanks for the donation, observed that works of such a class were valuable to the Society as records of the state of Zoology of that day, and as comparison with the present superiority of all works of the kind, and of the advanced state of scientific research. The works of Pennant, however, were well known for the accuracy of his inquiries.

*Membranaceous Duck, Dusky Petrel, and Manx Shearwater.*

Mr. Andrews then said that he had a few remarks to make relative to the paper brought forward on a former evening, on the capture of the membranaceous duck, in

Castlemain Bay, County of Kerry. He had since traced every circumstance fully confirmatory of its capture there; he regretted, however, that the windpipe or trachea had not been preserved, nor the sternum, which might have afforded additional interest to the observations. Apparently, the membranaceous duck would possess great power of flight, although its wings were extremely short, as in the Fuliginæ, the scaups or pochards, &c., whose powers of swimming and diving are great. Through the kindness of Dr. Farran, he had the opportunity of exhibiting and comparing fine specimens of the gadwall and of the shoveller duck. These beautiful birds, like the membranaceous duck, were remarkable in having the laminæ of the mandibles largely developed, and which were strongly so in the gadwall, a provision suiting them to their peculiar habits of feeding. The membranaceous duck, whose bill was extremely soft in its substance, seemed only suited to feed upon the softer Mollusca and gelatinous marine animals; thus the finely pectinated laminæ retain the minute creatures upon which the bird feeds, allowing only the watery portion to escape. In the paper before alluded to he had mentioned the capture, off the Island of Valentia, of the dusky petrel (*Puffinus obscurus*), and he was now, through the kindness of Mr. and Mrs. Blackburn, of Valentia, enabled to exhibit the specimen, which had been beautifully preserved. This bird, the *Puffinus assimilis* of Gould, a native of Norfolk Island and the eastern shores of Australia, is now first recorded as captured in Europe, never having been known north of the Mediterranean. It is, however, plentiful at the Cape of Good Hope, and probably on the north-west coast of Africa. The *Puffinus obscurus* is extremely like the Manx petrel (*Puffinus Anglorum*), but is readily distinguishable by its diminutive proportions, although sometimes the dusky petrel is a southern species, while the Manx petrel is a northern. Mr. Andrews had also the opportunity of exhibiting a specimen of the Manx shearwater, with the egg, taken in one of the cliffs on the Island of Valentia. These birds were always considered to breed on the Skellig Islands, but Mr. Andrews had never known the eggs to be obtained there. An egg had been sent to him taken from the smaller Skellig Island, and observed as belonging to a petrel, and stated to be that of the Manx shearwater, but on comparing it with the egg sent by Mr. Blackburn, it was of much smaller size, and not so oval as that of the egg of the Manx. On examination of the eggs in the British Museum, Mr. Andrews found one to correspond with it, and marked as the egg of Bulwer's petrel (*Thalassidroma Bulweri*). It was gratifying to have, so well authenticated by Mr. Blackburn, the egg of the Manx shearwater, as it was but little known to the naturalists of this country. The eggs of the petrels are large in proportion to the size of the birds, and it would be extremely interesting yet to prove that the egg of the petrel that had been sent to him was that of T. Bulweri. Having noticed such rare instances on the west coast, discovered within the last year, we may naturally expect to meet the other species of the petrels on that coast. The petrels on the south-west coast seemed principally to breed on the smaller Skellig Island, and on the Islands of Innismacalaun and Innisnabroe, two of the Blasket Islands. In conclusion, Mr. Andrews could not but observe on the extreme interest of the birds exhibited this evening; two of the rarest additions to British Ornithology that had been made for years. The dusky petrel excited great interest when exhibited by Mr. Yarrell, at the Linnean Society, in June last; and this Society was much indebted to the kindness of Mr. and Mrs. Blackburn, of Valentia, in now affording the opportunity of seeing the specimen, and of that of the Manx shearwater. Living in a wild and remote retreat, Mr. and Mrs. Blackburn, with their daughter, devoted much of their



time to literary pursuits, and the two latter had, by their observations, gained and added much interesting information to the Zoology and Botany of that district.

Mr. Williams said, that he had long and great experience in watching the habits of water-fowl, and he did not consider that the shoveller had any peculiarity in its feeding; he observed it when swimming to skim the surface of the water with its bill, but to eat potatoes and meal in common with others of the duck tribe.

The Chairman remarked that the habits of birds in confinement could not be considered generally as the true mode of seeking and using food, as their wild state influenced them. They more commonly adapted their habits to the use of the artificial food supplied to them.

Mr. Andrews said that in the instance of a merganser, the strong serration of whose mandibles in the wild state enabled it to retain the fish it captured, the serrated character of the bill became blunt, and to some degree obliterated, by its change of food in confinement.

Mr. Kinahan was much interested in the remarks, particularly in that part where the breeding of the birds in the country had been confirmed. It was very undesirable to consider mere stragglers as natives. He had heard of the siskin breeding in summer in Powerscourt woods, also in Tipperary. Instances had been mentioned of the black-capped warbler and the redwing breeding there.

#### *Reproduction and Distribution of the Smooth Newt.*

Mr. Kinahan then read the following paper "On the Reproduction and Distribution of the Smooth Newt, and a Notice of the Popular Superstitions relating to it."

"Some years ago my attention was directed to these interesting animals, chiefly with reference to the number of species found in and about Dublin. I was then so fortunate as to have an opportunity of watching the progress of some of the earlier stages of development of our only Dublin species, the smooth newt (*Lissotriton punctatus*, Bell). Within the last few months my attention was again called to them by a very interesting and valuable paper by Mr. J. Higginbottom, of Nottingham, in the 'Annals' for December, 1853, [see Zool. 4243]. In this paper, which is stated to be the result of five years' close study, the author enters very fully into the habits and distinctions of the different species, corroborating for the most part the previous researches of Rusconi in his 'Amours des Salamandres,' and of Professor Bell, in his excellent treatise on 'British Reptiles,' and also adding much to our knowledge by researches into what he calls their terrestrial stage. On reading this paper, I was struck with several discrepancies between Mr. Higginbottom's observations and my own. Whether this arose from his observations having been made solely on the warty newt (*Triton cristatus*), on which point there is some ambiguity in his paper, and mine on the smooth newt, or from some accidental cause, leaving others to decide, I shall content myself with detailing what I saw, and pointing out the discrepancies between the conclusions arrived at by Mr. Higginbottom and the results of my own experiments.

"On the 11th of May, 1851, I placed two smooth newts (*L. punctatus*), one a female, captured in the Bishop's Fields on the preceding day, the other a male, taken some ten days previously, in a glass jar, four inches in diameter, and about eighteen inches high; this was filled with water to within a few inches of its summit, and had floating in it a plant of the Indian pond-weed. On the 15th I found that the female had deposited half-a-dozen eggs; these were small, and made up of a round white body, about the size of a grain of mustard-seed (which it much resembled), floating



inside of a pellucid opal-coloured sac. During the two following days she deposited about a dozen more; they were arranged in strings of four to six, adhering in rows, and intertwined among the long floating roots, and also through the axils of the leaves, but in no instance could I find them deposited singly in the folded edges of the leaves, as Bell states, and Mr. Higginbottom asserts, is necessary for their preservation: Bell indeed states that they are sometimes placed in the axils of the leaves. The female, when depositing the ovum, wound her tail round the roots of the plant, as if to anchor herself. Of the ova produced, I distributed among my friends all but two; these I placed in a small bottle of water in a window facing the S.W., in a room of the temperature of from 60° to 70° F.; they were soon hatched, the one on the 3rd of June, the other on the 5th. This appears to contradict Mr. Higginbottom's statement, that the ova must be folded up in a leaf, and thus protected from the free access of the water, as these ova were hatched while lying at the bottom of the vessel, and had been knocking about for several hours in a small bottle in my pocket, previously to having been placed in the window. I do not mean to assert that the ova are not deposited also singly in the folded leaves, but merely that they are not necessarily so. The progress of their further metamorphosis has been so well described by Bell, that a lengthened description on my part were superfluous; suffice it to state, that the newts lived with me for fourteen days from the day they were hatched, and five weeks from their extrusion as ova; they then died, and at this period the most forward had the anterior extremities well formed, and the situation of the posterior marked by a protuberance on each side.

"With respect to fecundation, my experience with regard to this species goes to corroborate the opinion of Professor Bell, as opposed to that of Rusconi and others, including Mr. Higginbottom.

"With respect to its distribution, this species is found throughout this entire country, even at considerable elevations above the sea. I have found them near the summit of Howth, and in every quarry-hole among the Dublin and Wicklow mountains. It is known by various names: in its aquatic state as man-keepers, man-eaters, dark-lewkers, daddy-lewkers, and art-lewkers; and in its terrestrial stage as the dry ask and lizard. It is much earlier in awaking from its hibernation and seeking the water here than in the midland counties of England. I generally find them in the ponds in the Bishop's Fields about the second week in February. In other parts of Ireland they are pretty generally distributed: Thompson states, "occurring from North to South, but not generally distributed;" and in his Comparative List, he records it for Belfast, Dublin, and the West. There are numerous specimens of this species, obtained in the North, in the Ordnance Survey collection, now in the Museum of Irish Industry. I have obtained it in, or received specimens from, the following places:—North of Clare, rare; Tipperary North, scarce; South, common; King's County, Kildare, Wicklow, Wexford; Kilkenny, upon the authority of the Rev. J. Graves, who informs me it there goes by the name of dark lewker, which, he suggests, is derived either from *dearc*, a reptile, and *leucair*, brightness, that is, the shining reptile; or from *leuacrac*, a rush, that is, the reptile dwelling in rushy places: by this name it is known all over Ireland. It is also, I am informed, found in Louth and the Queen's County. It is omitted from the Catalogue of the Cork Cuvierian Society, and I searched for it unsuccessfully about Youghal and Ardmore, though I have reason to believe it is found in part, at least, of the County Waterford. Nulty, in his 'Natural History of Dublin,' mentions this animal among the quadrupeds, in its two

states, as distinct species: — 1. The dry ask, or man-keeper; and 2. The water-ask, or arglogher, (the last manifestly the same word as dark lewker, which name, in some parts of the County Dublin, is pronounced art looker). He mentions, for the purpose of contradiction, two traditions connected with it as current in his time: — 1. That it is poisonous; and, 2. That it can live in the midst of fire. With respect to the popular name, I find some of the lower orders call both the dry ask and the water-ask man-keeper or man-eater, while the names dark lewker &c. are restricted to the animal in its aquatic state. In Scotland, the animal is also called dearc luachrach in Gaelic.

“This brings me to the third part of my paper, namely, the superstitions connected with this animal. There are several of them curious and interesting, as having a connexion with the religious belief of the former inhabitants of this country, and are now fast dying away. In almost every part of the country we find these animals looked on with disgust and horror, if not with dread; this arises from two superstitions: one of them, common to great part of Ireland, relating chiefly to the animal in its aquatic state, and which in the county of Dublin has earned for it the names of man-eater and man-keeper; though the dry ask of the county of Dublin, that is, the animal in its terrestrial stage, is supposed to be equally guilty with the first-mentioned, in the habit of going down the throats of those people who are so silly as either to go to sleep in the fields with their mouths open, or to drink from the streams in which the dark lewkers harbour; they are also said to be swallowed by the thirsty cattle: in consequence, the country people kill them wherever they meet with them on land, and poison the stream they are found in by putting lime into the cattle’s drinking-pools. In either case the result is the same: the reptile taking up his quarters in the interior of his victim in some way, it would puzzle a physiologist to explain how, it contrives to live on the nutriment taken by the luckless individual or animal, so that, deprived of its nourishment, the latter pines away; nay, so comfortable does the newt make herself, that not content with living by herself, she contrives to bring up a little family. Often have I been told of the man who got rid of a mamma newt and six young ones, by the following recipe, which I am assured is infallible: — ‘The patient must abstain from all fluids for four-and-twenty hours, and eat only salt meats; at the expiration of that time, being very thirsty, he must go and lie open-mouthed over a running stream, the noisier the better, when the newts, dying of thirst, and hearing the music of the water, cannot resist the temptation, but come forth to drink, and of course you take care they do not get back again. The dry ask, in addition to this bad character, is also supposed to be endowed with the power of the ‘evil eye,’ — children and cows exposed to its gaze wasting away. The Rev. J. Graves writes to me, that in Kilkenny it is looked on as ‘a devil’s beast,’ and, as such, burnt. But to compensate in some measure for its evil qualities, the dry ask is said in Dublin to bear in it a charm. Any one desirous of the power of curing scalds or burns, has only to apply the tongue along the dry ask’s belly to obtain the power of curing these ailments by a touch of that organ. In the Queen’s County it is also used to cure disease, but in a different way; being put into an iron pot under the patient’s bed, it is said to effect a certain cure, though of what disease I am not quite clear.

“The warty newt (*Triton cristatus*) rests solely on Mr. Templeton’s authority. It is an inhabitant of every part of England, and might naturally have been expected to be found in Ireland; it may yet perhaps be met with in the western wilds, where Mr. Thompson has, from description, recorded the palmated newt (*Lissotriton palmipes*), which has been found both in England and Scotland. It is recorded in the Catalogue

of your Museum, but of the locality where it is said to be obtained, I cannot find any record.

"Other points of interest relating to the economy of these animals, many of them bearing on Mr. Higginbottom's paper, I hope to lay before you at some future period, when I have made further experiments."

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TYNESIDE NATURALISTS' FIELD CLUB.

*Anniversary Meeting, March 15, 1854.* — SIR W. C. TREVELYAN, Bart., in the chair.

The President, on retiring from office, read to the Members a highly interesting Address, recommending to them the study of the fossil Infusoria, and the microscopical examination of coal. He exhibited a fossil pearl, of the size of a small marble, and which in appearance it much resembled.

Some additions to the insect Fauna were communicated by Mr. T. J. Bold, who also read a paper, intituled "Notes on the Effects of the extreme wet Winter of 1852-3 on Insects." From this paper we learn that the immense swarms of "cholera-flies" which were seen in Newcastle and the vicinity last autumn, were winged Aphides; the greater number consisting of *Aphis Rumicis*, with a sprinkling (perhaps one in a thousand) of *A. Brassicæ*. The former had previously been noticed to infest fields of beans, and the latter, turnips.

Mr. D. Oliver, jun., communicated some interesting botanical notes, and exhibited some fine specimens of rare plants collected at the field meeting held in Teesdale in July last.

Mr. Storey, the Secretary, announced that he hoped to have the first part of his 'Flora of Northumberland and Durham' ready for distribution to the Members before the next Anniversary.

Mr. Storey also called the attention of the meeting to an isolated boulder stone, bearing strong marks of glacial or diluvial action, which he had observed lying partially exposed in a field on the Elswick estate, between South Parade and Scotswood Road.

The places selected for the field meetings of the ensuing season are Dilston, Brinkburn Priory, Lindisfarne, Castle Eden, Northumberland Lakes, and Alnwick. It is also intended to hold a subterranean meeting in one of the coal-mines of the Tyne or Wear.

The following gentlemen were elected Officers for the year ending February, 1855.  
*President* :—Thos. Sopwith, F.R.S. *Vice-Presidents* :—Sir W. C. Trevelyan, Bart., Wm. Kell, Dr. Embleton, Joshua Alder, Jos. Fryer, and Ralph Carr. *Treasurer* :—Thos. Burnett. *Secretaries* :—John Storey, F.B.S.E., and Edward Mather. *Committee* :—Rev. G. C. Abbs, Albany Hancock, John Thompson, T. J. Bold, R. Y. Green, Rev. Wm. Greenwell, Richard Howse, Joseph Blacklock, John Storey, jun., Wm. Sidney Gibson, F. J. Peck, and D. W. Oliver, jun. The under-mentioned gentlemen were elected Members of the Club :—Messrs. R. W. Bleasby, C. Crighton, Wm. Green, jun., D. H. Goddard, and Cuthbert E. Ellison, Esq.—T. J. B.

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References to foreign works are given only when needful; but references to the undermentioned British works accompany each species; and it should be observed that the last edition is invariably quoted, unless it is otherwise expressed: this is done on the supposition that the last in every instance contains the matured views of the author, as regards nomenclature and specific limits.

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*E. B. S.* Supplement to English Botany.

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[*Extracted from the 'Phytologist' for June, 1854.*]

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The following portions of the second edition are omitted from the third:—The genera *Equisetum*, *Lycopodium*, *Isoetes*, and *Pilularia*; also a great number of the habitats of the *commoner* species, and a large portion of the critical remarks on the bibliography of the species.

The following additions are made:—A short diagnostic character of every genus and species; a synonymic reference to all British and the more important continental describers; and careful directions for the cultivation of every species.

The following alterations have been made:—The history of each species is divided into heads, which are thus intitled:—Characters; Synonymes, Figures, &c.; Geographical Range; Description; Varieties (if any); Culture; Economical uses: the details of the habitats of the *rarer* species are more minutely given than in the second edition, and those which are unsatisfactory, from any cause whatever, are inclosed in parentheses.

The arrangement remains unaltered, but the author's views of classification are thus explained at length:—

“It is impossible for the candid mind to dwell for a moment on the fact that Britain produces only about one-fortieth part of the ferns already known as inhabiting the globe, without perceiving the impracticability of arranging that fractional part in anything like a connected series. Select one British species, *Capillus-Veneris*, for instance, and we shall find that there are at least a hundred exotic species which approach it more closely than any that occur in Britain: therefore, assuming that two thousand ascertained ferns constitute a connected chain, it follows that in Britain a hundred links are wanting at that part of the chain where *Capillus-Veneris* is situate. There is still another mode of accounting for some of the monstrous gaps observable in the chain of species. The physical

changes perpetually occurring in the condition of the earth's surface, render large tracts of land incapable of sustaining any longer certain species which formerly hid the soil with their luxuriant foliage: we know that thousands of such species did exist, and do not exist; but that their history is preserved for ever in Geology, that glorious book whose pages are traced by Nature's own hand upon tablets of adamant. The hypothesis that Nature is compensating her losses by new creations, requires the recommendation of proof. All our Floras tell a different tale. The links which once connected *Equisetum* to *Chara* or to *Isoëtes* have since perished, and no others have been supplied; so that those genera stand alone and insulated, while all around them has disappeared: just as solitary specks of uninhabitable land, peeping up in the boundless ocean, are said to testify of a continent submerged. Whoever reads these circumstances aright, will fully appreciate the difficulty under which those are labouring who endeavour to build a system of such scanty materials. Deeply impressed with this difficulty, I have thought it better to preserve intact the arrangement which I originally proposed, than to attempt a new one; at the same time giving an outline of a plan which I believe more in accordance with Nature.

"It may here be observed, that in the various systems proposed or indicated by general botanists, as Ray, Linneus, Antoine de Jussieu, Agardh, Perleb, Dumortier, Bartling, Hess, Schultz, Fries, Endlicher, Brongniart, Meisner, Adrian de Jussieu, and Lindley, there is a most evident tendency to depreciate, or rather to under-estimate, the flowerless plants. Whether they were called simply "flowerless," as by Ray; "Cryptogams," as by Linneus; "Acotyledons," as by the elder Jussieu and Decandolle; little has been done beyond the mere change of name. All these authors appear either to ignore or to disregard the extreme fallacy of divisions founded on a mere positive and negative. Nothing is more simple than the divisions of all plants into those which *have* flowers, and those which *have not*: but something more is required, for positive and negative characters might be made the basis of the most unnatural divisions.

"Cuvier, in his 'Animal Kingdom,' a work unapproached, perhaps unapproachable, in its masterly and philosophical grouping, has shown the plans on which all animals are constructed. He ignores the positive and negative of vertebrate and non-vertebrate, and employs positive characters only in defining his divisions; these are Vertebrates, Mollusks, Articulates, and Radiates: and a little reflection will convince any botanist that there are four great divisions of



plants, equally capable of being distinguished by positive characters; these are Exogens, Endogens, Acrogens, and Thallogens.

"Acrogens, in common with Thallogens, are without flowers; 'nothing can be found which resembles the stamens and pistils of flowering plants:' they have usually distinct roots, stems, and leaves, the two halves of the latter being generally symmetrical; these characters serving at once to distinguish Acrogens from Sea-weeds, Lichens, or Fungi. Interesting as are the discoveries which Nägeli and his followers have made on the pro-embryo of ferns, and which I had the pleasure of introducing to the notice of British botanists (Phytol. iii. 613 and 925), their bearing on the diagnostic characters of Acrogens has been wholly misunderstood. Abundant evidence exists that there is in these discoveries no contradiction to the assertion, that Acrogens, so far as our researches have extended, are perfectly asexual.

"Acrogens are either vascular and Pteridoid, or cellular and Mnioid: the first including all ferns and their allies, and the last, all mosses and their allies. The allies of ferns are Lycopodiums, Quill-worts, Pill-worts, Marsilias, Equisetums, and Charas: they have sometimes been called Cryptogamic Vasculares; but I prefer to define and divide them in the following manner, which, it will be observed, strikingly differs from the most popular and most recent arrangements. The division of the Filicales splits the universally received genera of Pteris, Polypodium, Asplenium, Davallia, and many others.

"ACROGENÆ PTERIDOIDÆ, Pteridoid Acrogens, or Ferns and their allies, are plants of vascular structure, but which produce fruit without preliminary flowers: they may be divided thus:—

FILICALES [or annulate Ferns] have distinct leaves bearing one-celled capsules which are encircled by an elastic ring: they comprise:—

RHIZOPHYLLACEÆ, in which the leaves are attached to a rhizome or root.

CORMOPHYLLACEÆ, in which the leaves are attached to a corinus or trunk.

OSMUNDALES [or exannulate Ferns] have distinct leaves and one-celled capsules detached from the leaves, and not encircled by an elastic ring: they comprise:—

OSMUNDACEÆ, in which the vernation of the leaves is circinate and the trunk woody.

OPHIOGLOSSACEÆ, in which the vernation of the leaves is straight and the trunk succulent.

LYCOPODIALES have distinct leaves and capsules divided by one or more septa : they comprise :—

MARSILIACEÆ, in which the capsules are attached to the rhizome or root.

LYCOPODIACEÆ, in which the capsules are seated in the axils of the leaves.

EQUISETALES have no leaves, but consist of an articulated branched stem : they comprise :—

EQUISETACEÆ, in which the fructification forms a terminal spike.

CHARACEÆ, in which the fructification is seated in the axils of the branches.

“It will be seen that the divisions Rhizophyllaceæ and Cormophyllaceæ have a great similarity to those proposed by Mr. John Smith, of Kew, under the names of Eremobrya and Desmobrya. I believe the idea of using this character as one upon which to found a primary division of the annulate ferns originated with myself, (see Phytol. ii. 273) ; but Mr. Smith was the first to apply the idea, and to name divisions founded on the differences pointed out. It must, however, be observed, that Mr. Smith, in his primary divisions, lays great stress on a character which now appears to me of somewhat secondary importance : I allude to the articulation of the stipes to the rhizome. My own conclusion, from a careful examination of the species within my reach, is, that the grand distinctive characters are these :—*First*, that the rhizome of the Rhizophyllaceæ, and the caudex of the Cormophyllaceæ, are not the same organ : that the rhizome is a root ; the caudex a stem : that the rhizome never terminates in a frond ; that the caudex always does : indeed, that its apex is constituted of fronds undeveloped ; its trunk, of the bases of fronds that have decayed. *Secondly* : that the growing apex of a rhizome is always in advance of the fronds ; that the fronds are always in advance of the growing apex of a caudex. There are two other and possibly less constant diagnostics : the rhizome of the Rhizophyllaceæ is scaly, the stipes naked ; the caudex of the Cormophyllaceæ is naked, the stipes densely paleaceous : the formation of the fruit of the

Rhizophyllaceæ follows the development of the frond ; in the Cormophyllaceæ it precedes it. In some Cormophyllaceæ there is a tendency to approach the Rhizophyllaceæ : this is strikingly the case in *Dryopteris*, *Phegopteris*, and *Thelypteris* ; but it is only necessary to examine the growing apex of the rhizomatiform caudex of these well-known ferns, in order to ascertain that it is always composed of undeveloped fronds. There is a plant familiar to every one who has a garden, that affords an illustration of the two modes of growth,—the common *Pyrus japonica*. The branches of this beautiful shrub always terminate in a bud, composed of undeveloped leaves ; such branches, therefore, are analogous to the caudex of a cormophyllaceous fern : the roots, on the contrary, spreading horizontally, and near the surface of the ground, never terminate in leaves, but possess the power of originating leaves and leaf-branches at any part of their surface except the growing apex ; and not leaves only, but flowers also : such leaf-bearing roots are striking analogues of the rhizome of rhizophyllaceous ferns. Could we therefore divide a *Pyrus japonica* into branches and roots, we should have representatives of these divisions of ferns : the branches would be cormophyllaceous, the roots rhizophyllaceous.”—P. vii.

The generic names have undergone considerable change : —

|                                      |   |                                        |
|--------------------------------------|---|----------------------------------------|
| <i>Lomaria</i> spicant of 2nd edit.  | = | <i>Blechnum</i> spicant of 3rd edit.   |
| <i>Pteris</i> aquilina               | = | <i>Eupteris</i> aquilina               |
| <i>Polypodium</i> vulgare            | = | <i>Ctenopteris</i> vulgaris            |
| „ <i>Phegopteris</i>                 | = | <i>Gymnocarpium</i> <i>Phegopteris</i> |
| „ <i>Dryopteris</i>                  | = | „ <i>Dryopteris</i>                    |
| „ <i>calcareum</i>                   | = | „ <i>Robertianum</i>                   |
| <i>Lastrea</i> <i>Thelypteris</i>    | = | <i>Hemestheum</i> <i>Thelypteris</i>   |
| „ <i>recurva</i>                     | = | <i>Lophodium</i> <i>fœnisecii</i>      |
| „ <i>multiflora</i>                  | = | „ <i>multiflorum</i>                   |
| „ <i>spinosa</i>                     | = | „ <i>spinosum</i>                      |
| „ <i>cristata</i>                    | = | „ <i>Callipteris</i>                   |
| „ <i>rigida</i>                      | = | „ <i>rigidum</i>                       |
| „ <i>Filix-mas</i>                   | = | <i>Dryopteris</i> <i>Filix-mas</i>     |
| <i>Asplenium</i> <i>Ruta-muraria</i> | = | <i>Amesium</i> <i>Ruta-muraria</i>     |
| „ <i>germanicum</i>                  | = | „ <i>germanicum</i>                    |
| „ <i>septentrionale</i>              | = | „ <i>septentrionale</i>                |
| <i>Scolopendrium</i> vulgare         | = | <i>Phyllitis</i> <i>Scolopendrium</i>  |
| <i>Ceterach</i> officinarum          | = | <i>Notolepeum</i> <i>Ceterach</i>      |

The new genera *Ctenopteris*, *Eupteris*, and *Gymnocarpium*, became necessary in consequence of the primary division of the *Filicales* above set forth: *Hemestheum*, *Phyllitis* and *Notolepeum* have received names in order that the Linnean names *Thelypteris*, *Scolopendrium* and *Phyllitis* might be restored to the species; these three genera were previously established: *Blechnum spicant* is a restoration of a Linnean name; *Dryopteris Filix-mas* is adopted from Schott; no other British fern has the complete reniform involucre of this species: *Lophodium* is new, and instituted because the species have been placed indifferently in either of the overwhelming genera *Polypodium*, *Polystichum*, *Aspidium*, *Nephrodium* or *Lastrea*, and, as we think, with increasing impropriety as we advance chronologically from the first to the last. *Polypodium* is least objectionable because it is only too comprehensive; *Lastrea* is most objectionable, because instituted by its learned author PURPOSELY TO EXCLUDE THEM: and he has framed his character with such skill and care that this object is effectually accomplished: *Amesium* is a mere division of *Asplenium*; whether it be desirable to divide that huge genus by a clear and unmistakeable character we leave others to judge.

In specific names we have many changes: Britain is a powerful nation, and perhaps withal a little self-satisfied, and there are those of its scientific sons who regard it as somewhat dignified to maintain a nomenclature of our own, and to be very indifferent as to its agreeing with that of our continental neighbours. If the name of a worthy man has been attached to a species, or if any name has been attached by a worthy man, it matters nothing at all that that species had a prior name universally received. All our authors are aware that the names *unilaterale*, *Robertianum*, and several others are thus situated, and yet they preserve the insular names from a feeling of nationality; *Wilsoni*, because Mr. Wilson is a worthy man, and because it was given by Hooker, another worthy man; *calcareum* because it was given by Smith, and so on with the rest. Alas! shall we never admit the catholicity of science!

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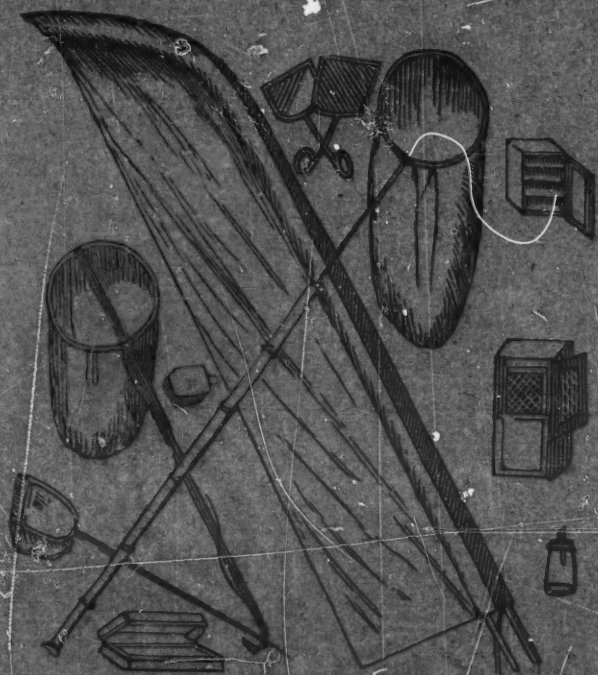


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